

REMARKS/ARGUMENTS

Status of the Application

Prior to the entry of this amendment, claims 1-15 were pending in this application. The Office Action objected to claim 4 under 35 U.S.C. Section 112, second paragraph, for lack of antecedent basis, objected to claim 14 for being incorrectly labeled “(Original)” and rejected claims 1-15 under 35 U.S.C. § 103(a) as being unpatentable over the Rowe reference (Pure and Applied Geophysics, 159 (2002) in view of U.S. Patent No. 5,747,750 to Bailey (“Bailey”).

The present amendment amends claims 1, 4-7, 10, 13 and 14. Therefore, claims 1-15 are presented for examination in this amendment. No new matter is added by the amendments and support for the amendments may be found, *inter alia*, at pages 2-5. Reconsideration of the claims as amended is respectfully requested.

Claim Objections

The Office Action objected to the designation of claim 14 as “Original” in view of the change of variables in the equations of the claim to boxes. Applicant believes that the changes in the equations resulted from a formatting error in the word-processing software. Applicant will try to prevent similar erroneous changes occurring in amended claim 14 in this Amendment.

The Office Action objected to claim 4 under 35 U.S.C. Section 112, second paragraph, for lack of antecedent basis for the limitation “the overall cross-correlation coefficient.” In response, Applicants have amended the limitation in claim 4 to provide for consistency with the claims it depends from, claims 1 and 3.

Section 102 Rejections

The Office Action rejected claims 1-15 under 35 U.S.C. § 103(a) as being unpatentable over Rowe in view of Bailey. To expedite prosecution of the present application and without consideration of the merits of the claim rejections, Applicants have amended

independent claim 1 to include the features that a potential doublet is identified in a first seismic trace, the characteristics of the potential doublet are then used to find a corresponding potential doublet in a second seismic trace and an overall measure of similarity of the characteristics of the two potential doublets is used to identify microseismic events. Applicants respectfully submit that neither the Rowe nor the Bailey reference, whether considered singly or in combination, make any mention of identification of doublets in seismic traces and provide no teaching or suggestion regarding identifying and analyzing doublets in multiple seismic traces.

Consequently, Applicants respectfully request that the Section 103 rejections of pending claims 1-15 be withdrawn.

CONCLUSION

In view of the foregoing, Applicant believes all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

In the event that a fee or refund is due in connection with this Amendment, the Commissioner is hereby authorized to charge any underpayment or credit any overpayment to Deposit Account No 19-0615. If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned.

Respectfully submitted,

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